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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,768	03/24/2004	Thomas E. Bolander	GP-303461	4288

7590 09/20/2005

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EXAMINER

LEWIS, TISHA D

ART UNIT	PAPER NUMBER
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3681

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/807,768

Applicant(s)

BOLANDER ET AL

Examiner

TISHA D. LEWIS

Art Unit

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 8, 13-15, 18 and 21 is/are rejected.
- 7) ☒ Claim(s) 3, 5-7, 9-12, 16, 17, 19 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

### DETAILED ACTION

The following is a first action on the merits of application serial no. 10/807,768 filed March 24, 2004.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 8, 13, 14 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tabata et al ('090) in view of Nehse ('674). Tabata et al discloses an engine and transmission control system having a clutch position sensor (via lock up clutch control means), a shift shaft position sensor (via shift action determining means) and a controller (59) that reduces engine speed (if engine speed is within a predefined range which is not to increase) when it is determined that an up shift is about to occur and the lock up clutch is partially disengaged, but Tabata et al activates cylinders to reduce the speed and not deactivate.

Nehse discloses a clutch control system having a controller wherein when partial disengagement begins after a shift is requested (i.e., upshift as in Figures 1 and 2), one or more of engine cylinders are cut (Figure 3 and column 6, lines 5-11).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Tabata et al with a cylinder deactivation in view of Nehse

to reduce engine torque when an upshift is occurring as opposed to reducing engine speed.

Claims 2, 15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tabata et al in view of Nehse as applied to claims 1 and 8 above, and further in view of Rayl ('353). Tabata et al in view of Nehse discloses variable deactivation of engine cylinders, but does not disclose an intake manifold vacuum signal as a parameter for the deactivation.

Rayl discloses a deactivation control system for an engine wherein upon an intake manifold vacuum signal being greater than a predetermined value (Figure 2), one or more cylinders of the engine are deactivated and when the value is less, the cylinders are activated.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide Tabata et al in view of Nehse with an intake manifold signal further in view of Rayl to smooth engine torque during the transition from activation to deactivation.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tabata et al in view of Nehse as applied to claim 1 above, and further in view of Kim ('541). Tabata et al in view of Nehse discloses a shift shaft sensor, but does not disclose two measuring devices for the sensor.

Kim discloses a shift by wire system having a shift shaft member (25) with at least three measuring devices (27a-27c).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Tabata et al in view of Nehse with an additional measuring device further in view of Kim to provide a back up detection in case the first device fails or detection of an intermediate position is needed.

***Allowable Subject Matter***

Claims 3, 5-7, 9-12, 16, 17, 19 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**FACSIMILE TRANSMISSION**

Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is **(703) 872-9326 before final and 703-872-9327 after final**. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see MPEP 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check **should not be** submitting by facsimile transmission separately from the check.

Responses submitted by facsimile transmission should include a Certificate of Transmission (MPEP 512). The following is an example of the format the certification might take:

I hereby certify that this correspondence is being facsimile transmitted to  
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Typed or printed name of person signing this certificate:

\_\_\_\_\_

\_\_\_\_\_

(Signature)

Art Unit: 3681

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MPEP 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

-Haga et al ('754), Dresden, III et al ('615), Badillo et al ('336), Yang et al ('212), Huffmaster et al ('253) and ('224).

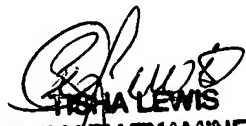
Any inquiry concerning this communication or earlier communications from the examiner should be directed to TISHA D. LEWIS whose telephone number is 571-272-7093. The examiner can normally be reached on M-Thur 6 AM TO 2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CHARLES A. MARMOR can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3681

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tdl  
September 15, 2005

  
TISHA LEWIS  
PRIMARY EXAMINER  
AU 3681 9/15/05